Challenges – Single Line of Accounting

Naval Inventory Control Point

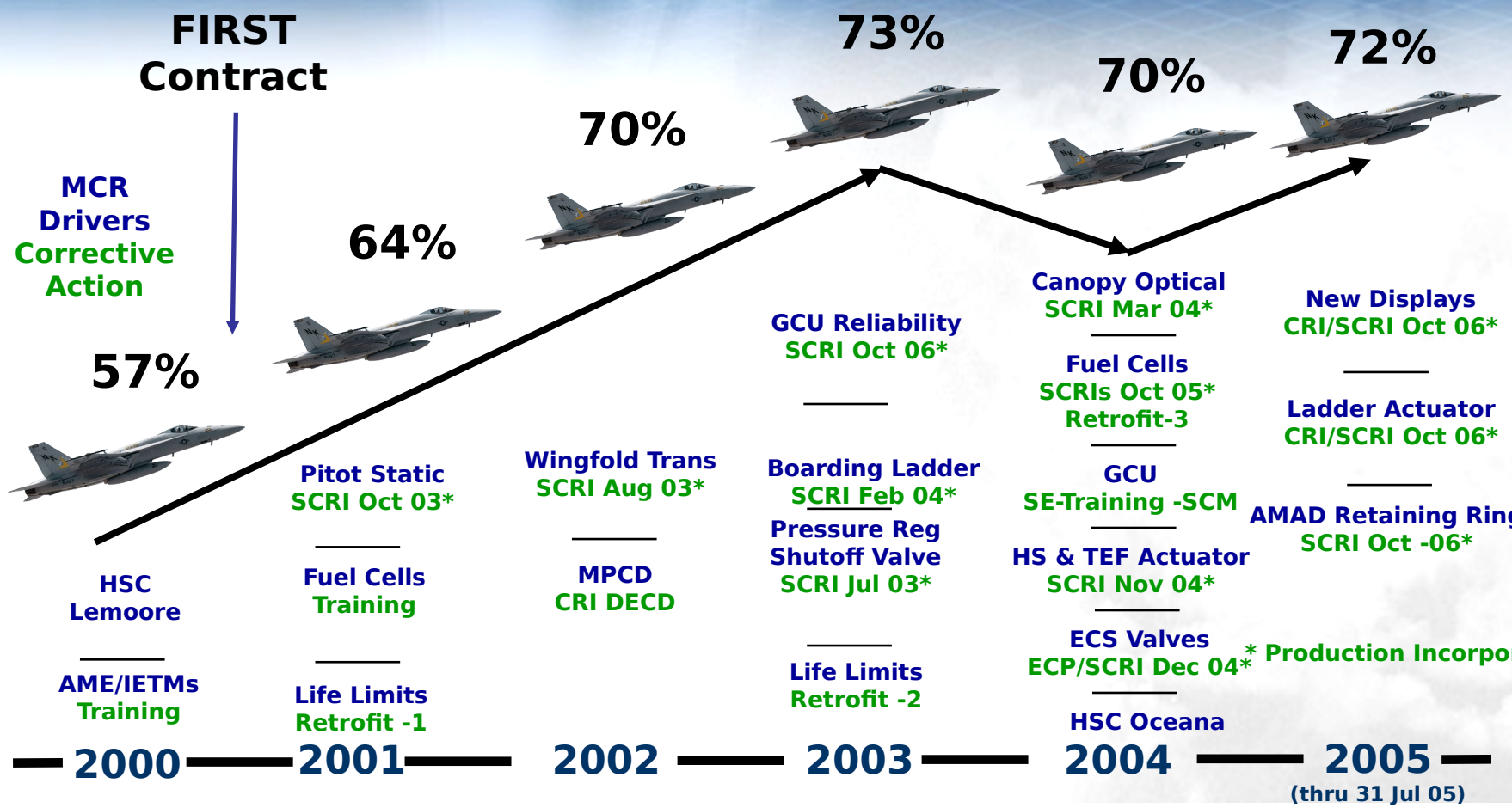
Traditional	PBLs
NWCF	NWCF
APN-1/5/6	APN-1/5/6
O&M,N	O&M,N
+ RDT&E	+ RDT&E
= ILS Elements	= ILS Elements
x **Govt** Execution	x **PBL Provider** Execution
= Performance	= **Performance**[2]

- **Government (NAVICP, DLA, PMA, NAWCs, NADEPs, AIMDs, etc.) develops unique policies and budget mechanisms that allow them to maximize their internal metrics (SMA, BOs, schedule, cost, etc.), segmented accountability and control by various stakeholders, all of which have budget requirements and restrictions, and different priorities.**

- **PBL providers integrate and align these unique policies and budget mechanisms to significantly increase weapon system performance at a reduced total cost…they create performance synergy for the weapon system.**

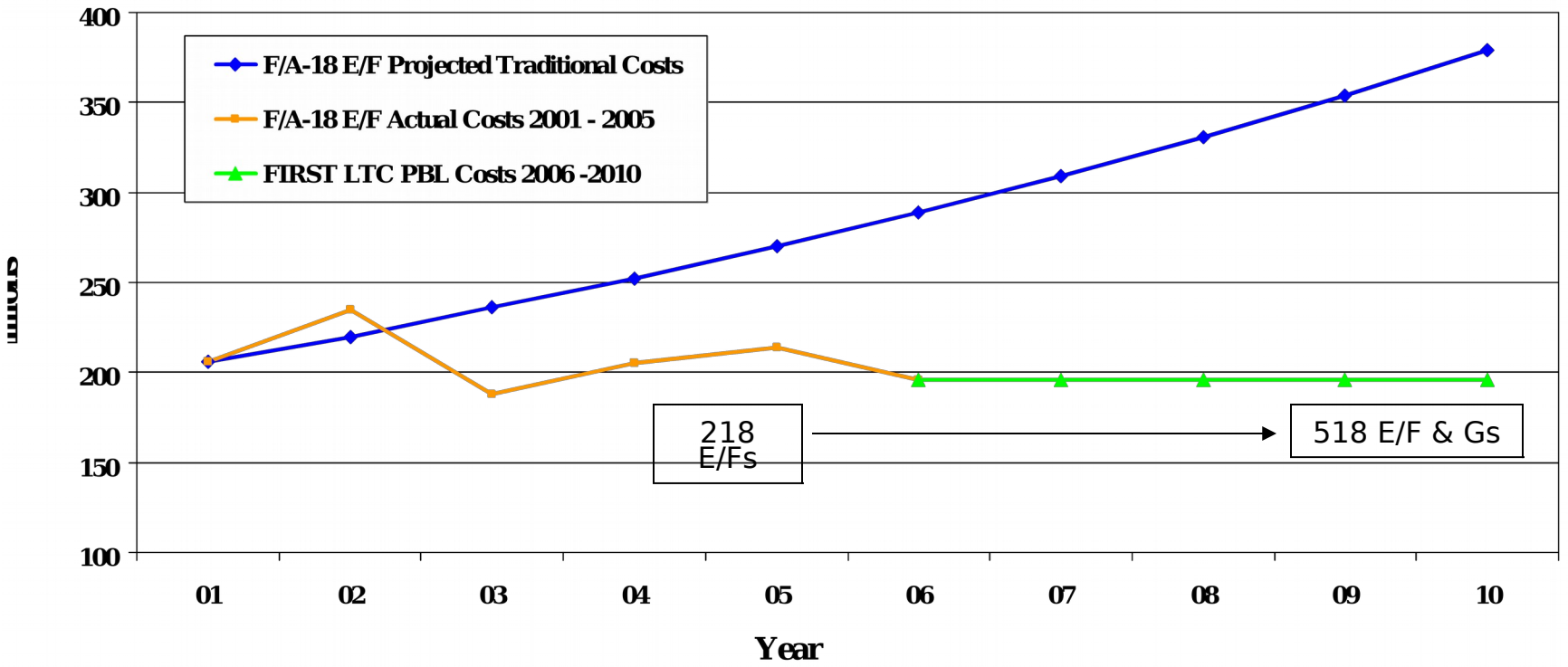
Super Hornet Readiness Status
(FIRST PBL Improving F/A-18E/F MC Rate)

Naval Inventory Control Point



FIRST vs Traditional Sustainment

- Under a traditional (non-PBL) support scenario, the cost of F/A-18 E/F spares & repairs was projected to increase at an annual rate of 7% (based on F/A-18 C/D historical support costs).
- FIRST stabilizes the cost of F/A-18 E/F spares & repairs.

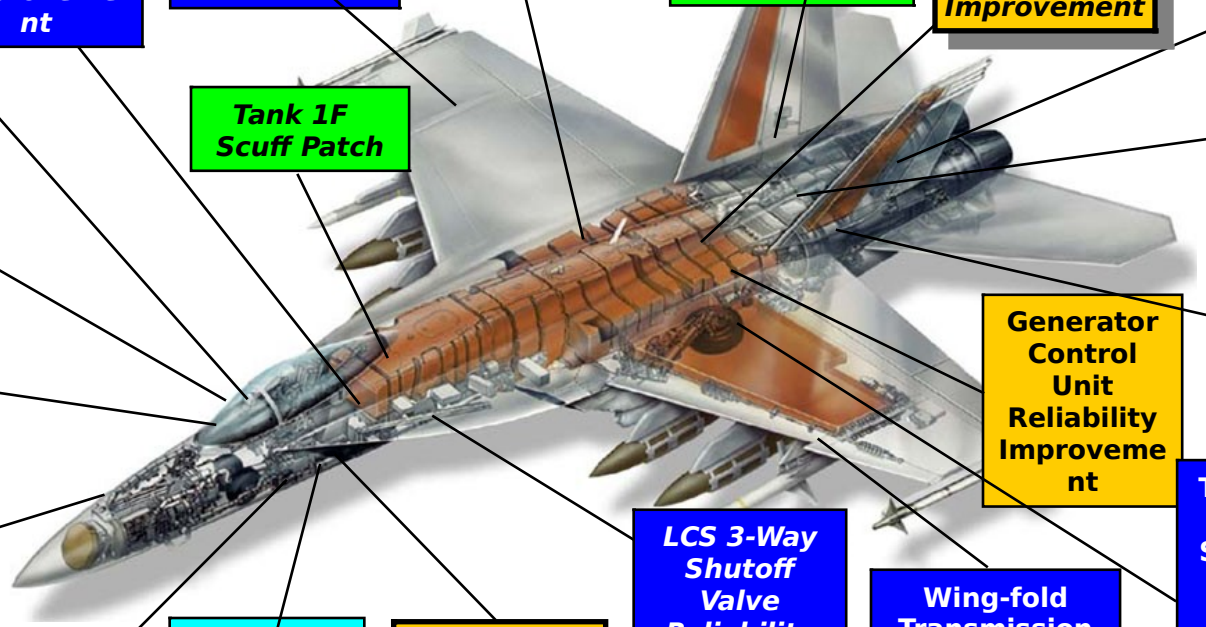


NAVSUP
Naval Inventory Control Point

Supportability Cost Reduction Initiatives (SCRIs)

ROI of 22 to 1

$19.8M non-recurring investment driving $430.2M* cost avoidance



- Common Canopy Design Glass
- Optical Repair Improvement
- *Second Source Displays*
- Digital Expandable Color Display (DECD) Supportability
- Pitot Static Probe Cover Enhancement
- Probe Heater Redesign
- *ECS Controller Software BIT Improvement*
- Flight Control Computer Maintainability Improvement
- Enhanced Surface Finish Training
- Boarding Ladder Reliability Improvement
- *Tank 3 Fittings*
- *Tank 1F Scuff Patch*
- *Boarding Ladder Actuator and Storage*
- Damage Repair Analysis Software
- *LCS 3-Way Shutoff Valve Reliability Improvement*
- *AMAD Power Takeoff Shaft Seal Improvement*
- Wing-fold Transmission Lug Bushings
- Arresting Hook Shank Corrosion Protection
- Pressure Regulating/Shut Off Valve Redesign
- Generator Control Unit Reliability Improvement
- Horizontal Stabilator Servocylinder Wire Harness Improvement
- Trailing Edge Flap Servocylinder Wire Harness Improvement

Incorporated/Complete
IW/Partial Incorporation
New for 2005
Approved / In Work
Pending Concurrence

*oint NAVAIR, NAVICP and Boeing total cost avoidance validated by AIR-4.2 & Approved 12/6/04

Slide approved by ESC on 6-2-05

Naval Inventory Control Point

Mean Flight Hours Between Demands Increases

SCRI #	Nomenclature	Baseline MFHBD*	**New Projected MFHBD***	Boeing LCC Avoidance	NAVAIR LCC Avoidance
62	2nd Source Displays-Color Displays/UFCD E/F	234/484/348	**532/1108/785**	$126.8	**$57.6**
33	Canopy Glass Repair Improvement - E/F Fwd	3,235 / 1,986	**3,595 / 3,678**	$111.3	**$171.2**
1	Pitot Static Probe (See SCRI #31)	579	**1,599**	$38.7	**$16.9**
2	WF Transmission Bushing (1)	5,827	**13,746**	$32.8	**$38.8**
3	PRSOV	718	**918**	$17.7	**$17.7**
25	AMAD Retaining Ring Improvement (4)	339	**375**	$17.7	**$17.7**
10	FCC OFP Maintainability Update (4)	233	**256**	$15.0	**$15.0**
55	TEF Servo Wire Harness Improvement	995	**1,603**	$14.8	**$14.8**
56	Hor. Stab. Servo Wire Harness Improvement	807	**1,122**	$14.2	**$14.2**
12	GCU Reliability Improvement (Pre-SCRI 25 Inc)	396	**479**	$12.8	**$26.6**
39	Depot Repairs	N/A	**N/A**	$9.2	**$9.2**
21	DECD Supportability Improvement	N/A	**N/A**	$9.1	**$9.1**
32	Common Canopy Design	N/A	**N/A**	$6.8	**$6.8**
11	Hook Shank Corrosion Inprovement	868	**998**	$6.4	**$6.4**
45	ECS Controller S/W Improvement (4)	1,118	**1,377**	$4.8	**$4.8**
46	LCS 3 Way SOV Improvement	1,784	**2,981**	$1.6	**$1.6**
58	Tank #1 Scuff Patch	3,576	**5,959**	$1.1	**$1.1**
7	Enhanced Surface Finish Training	N/A	**N/A**	$0.4	**$0.4**
4	Aft Avionics Cooling Fan	3,325	**5,078**	$0.0	**$0.0**
15	Boarding Ladder Reliability Improvement	7,195	**37,013**	$0.0	**$0.0**
	Total			$441.3	**$430.2**

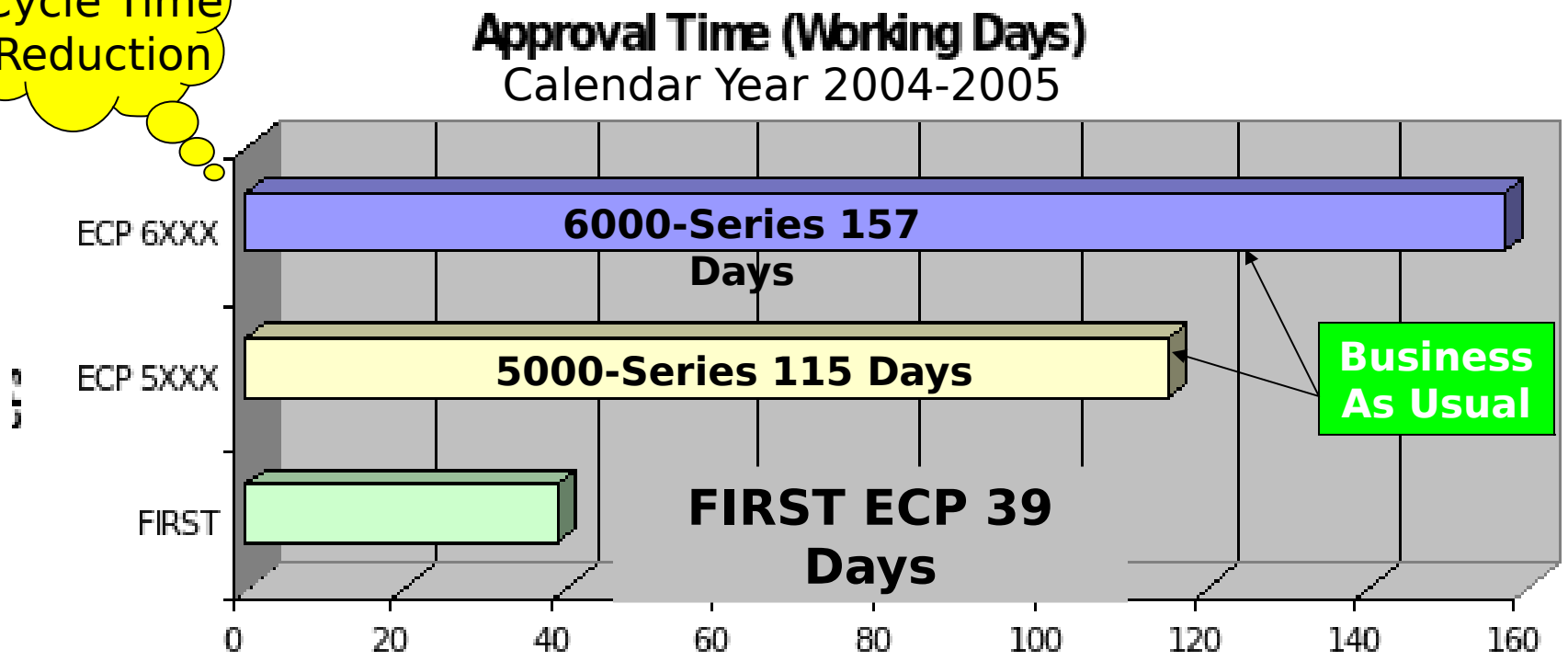
* All MFHBD values correspond to 30 year average ship set values

HBD Focus is on costs Savings and Quality of Life Improveme

Engineering Change Proposal Velocity

Naval Inventory Control Point

75% Cycle Time Reduction



FIRST ECP Velocity Improvements Increase Time on Wing/MFHBD

Naval Inventory Control Point

FIRST Achievements

- Sustained Aircraft Availability During Time of War
  - 97.5% Sortie Rate for VFA-115 during Operation Enduring Freedom
  - 99% Depth and Range Stockage Effectiveness for Aircraft Carriers
  - Decreased NMCS/PMCS Requisitions and Cannibalization Actions

- Increased Fleet Readiness via Supply Chain Improvements
  - FIRST ECP Process Reduced ECP Approval Time (157 to 39 days)
  - Average Depot Turn-around-Time Reduced (90 to 54 days)

IRST is meeting logistics objectives of the Flee

FIRST Achievements

- Provided Total Weapon System Lifecycle Support
  - •Integrated Supply Chain to Optimize & Consolidate Numerous Contracts
  - •Shifted Risk/Responsibility for Obsolescence Management to Industry
  - •Created Expandable Contract (Scope Adds: ECPs, SE, DLA, Training, Etc.)
- Streamlined Contracting and Financial Processes & Mechanisms
  - •Single PBL Contract for Multiple ILS Elements and Lines of Accounting

RST is meeting objectives envisioned by DoD/D

- •Commercial Services Agreements with All 3 Naval Depots

Commercial Services Agreement (CSA)

- NADEP North Island averaging 100 plus completed FIRST repairs per month
- Average NADEP Repair Time is 32 days (45 day requirement)
- Task Description Document (TDD) defines specific work scope
- Purchase Order provides quarterly forecast and required funding
- Memorandum of Agreement (MOA) allows use of government facilities

NADEPs Success Good for Fleet and Industry

NAVSUP
Naval Inventory Control Point

F/A-18 Sustainment Strategy

- Created Virtual Program Office to Focus, Manage, and Lead Sustainment Efforts of Numerous Government Stakeholders.
- Utilized Multiple OEM Centric Performance Based Logistics (PBL) Contracts to Provide the Best Value, Long-term Support Solution for all F/A-18 A through F and EA-18G.
- Focused F/A-18 Performance Goals on Metrics driven by the Performance Based Agreement (PBA) between the Warfighter and Program Manager (PM).

One Team + One Focus = Improved Readiness for the Warfighter

Naval Inventory Control Point

F/A-18 Virtual Program Office

Performance Based Agreement

- MOA between the warfighter (CNAF) and Program Manager.
- Specifies the warfighter's performance expectations via quantifiable metrics.
- Documents the warfighter's requirements to be achieved by award of the Performance Based Logistics

Warfighter's Performance Based Agreement

Program Manager
F/A-18 & EA-18G

F/A-18 APML
Assistant PM for Logistics

Product Support Integrator
NAVICP: F/A-18 Integrated Weapon System Team

PSI's Roles and Responsibilities

- PM's agent for implementing his sustainment vision/objectives.
- Coordinates organic/private sector support to maximize readiness at the lowest cost.
- Manages all support contracts, MOUs, and MOAs to meet the metrics specified in the Performance Based Agreement (PBA)

NADEP NI/JAX/CP

FST NI/JAX/CP

NAWC China Lake

NATEC NI

DLA DSCR/C/P

PMA-265 209/260

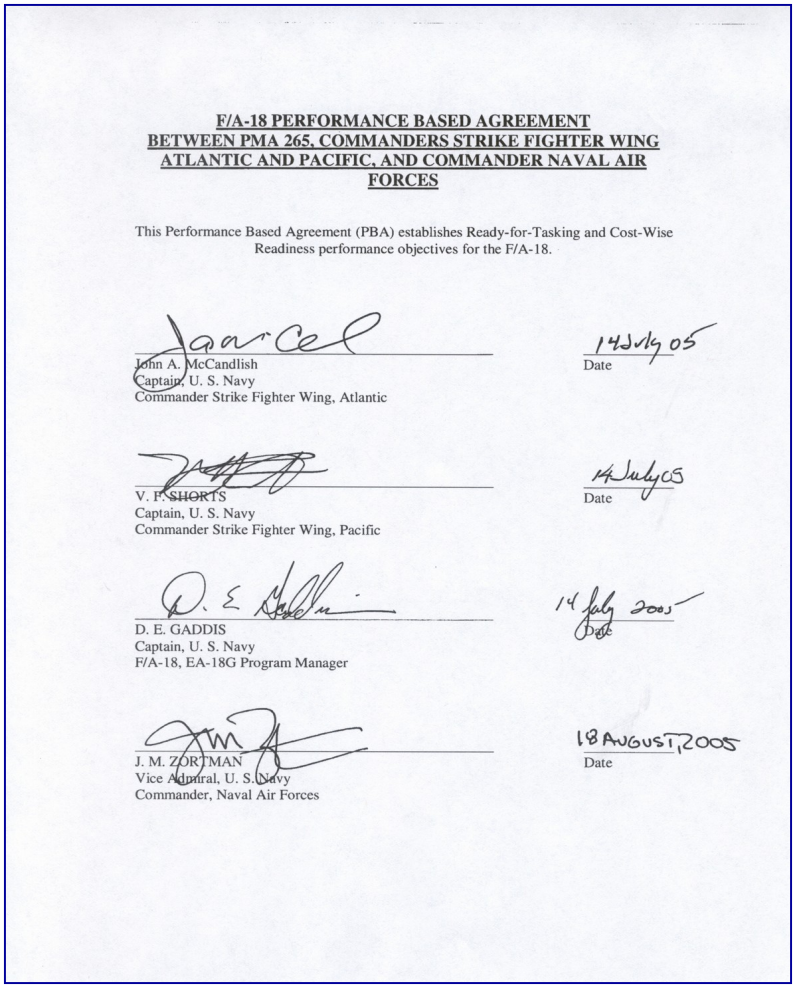
NAWC Lakehurst

FLEET AIMDS

FLEET MALS

PMA-265 and the Fleet Combine for the First Ever PBA

Naval Inventory Control Point



F/A-18 PERFORMANCE BASED AGREEMENT
BETWEEN PMA 265, COMMANDERS STRIKE FIGHTER WING ATLANTIC AND PACIFIC, AND COMMANDER NAVAL AIR FORCES

This Performance Based Agreement (PBA) establishes Ready-for-Tasking and Cost-Wise Readiness performance objectives for the F/A-18.

John A. McCandlish
Captain, U. S. Navy
Commander Strike Fighter Wing, Atlantic
Date 14 July 05

V. P. SHORTS
Captain, U. S. Navy
Commander Strike Fighter Wing, Pacific
Date 14 July 05

D. E. GADDIS
Captain, U. S. Navy
F/A-18, EA-18G Program Manager
Date 14 July 2005

J. M. ZORTMAN
Vice Admiral, U. S. Navy
Commander, Naval Air Forces
Date 18 AUGUST 2005

"… This F/A-18 PBA establishes Ready-for-Tasking (RFT) and Cost-Wise Readiness performance objectives as agreed to by Commander, Naval Air Forces (CNAF), the F/A-18 Program Manager (PMA-265), and Commanders Strike Fighter Wing Atlantic and Pacific."

"… CNAF, PMA-265, CSFWL and CSFWP shall utilize RFT to measure F/A-18 readiness. PMA-265 shall support the Fleet in meeting the CNAF RFT Entitlement."

"… CNAF and PMA-265 will assess the performance objectives in the PBA and monitor, analyze, and develop appropriate metrics that incentivize the supply chain to focus on mission accomplishment and cost-wise readiness."

"… Upon signature of this PBA, PMA-265 will incorporate these performance objectives into the F/A-18 Integrated Sustainment Strategy."

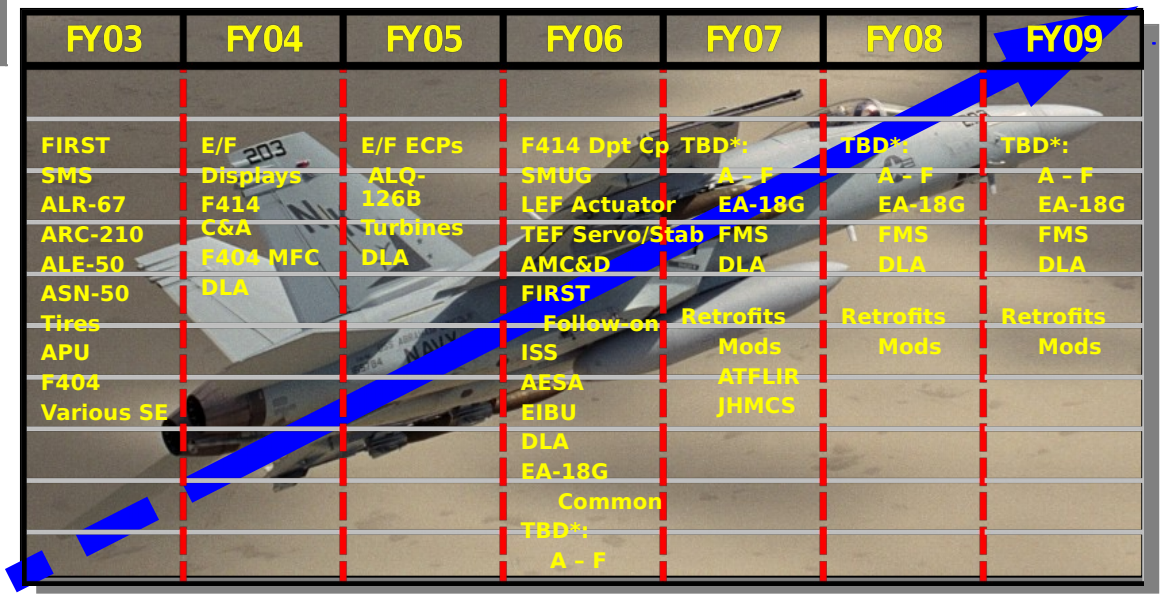
F/A-18 Sustainment Vision

Naval Inventory Control Point

Goal: Optimize Support to all F/A-18 Models for all F/A-18 Users

Vertical Growth

- A-F Common Items
- E/F Roadmap Systems
- New & Legacy FMS Sale
- EA-18 Unique Items
- A-D Unique Items



E/F Unique Material + ILS, SE, Tech Data

- **Mods & Upgrades**
- **Retrofit Kits & Installs**
- **Fleet Support Engineering, etc.**

Goal: Optimized F/A-18 Support Solution

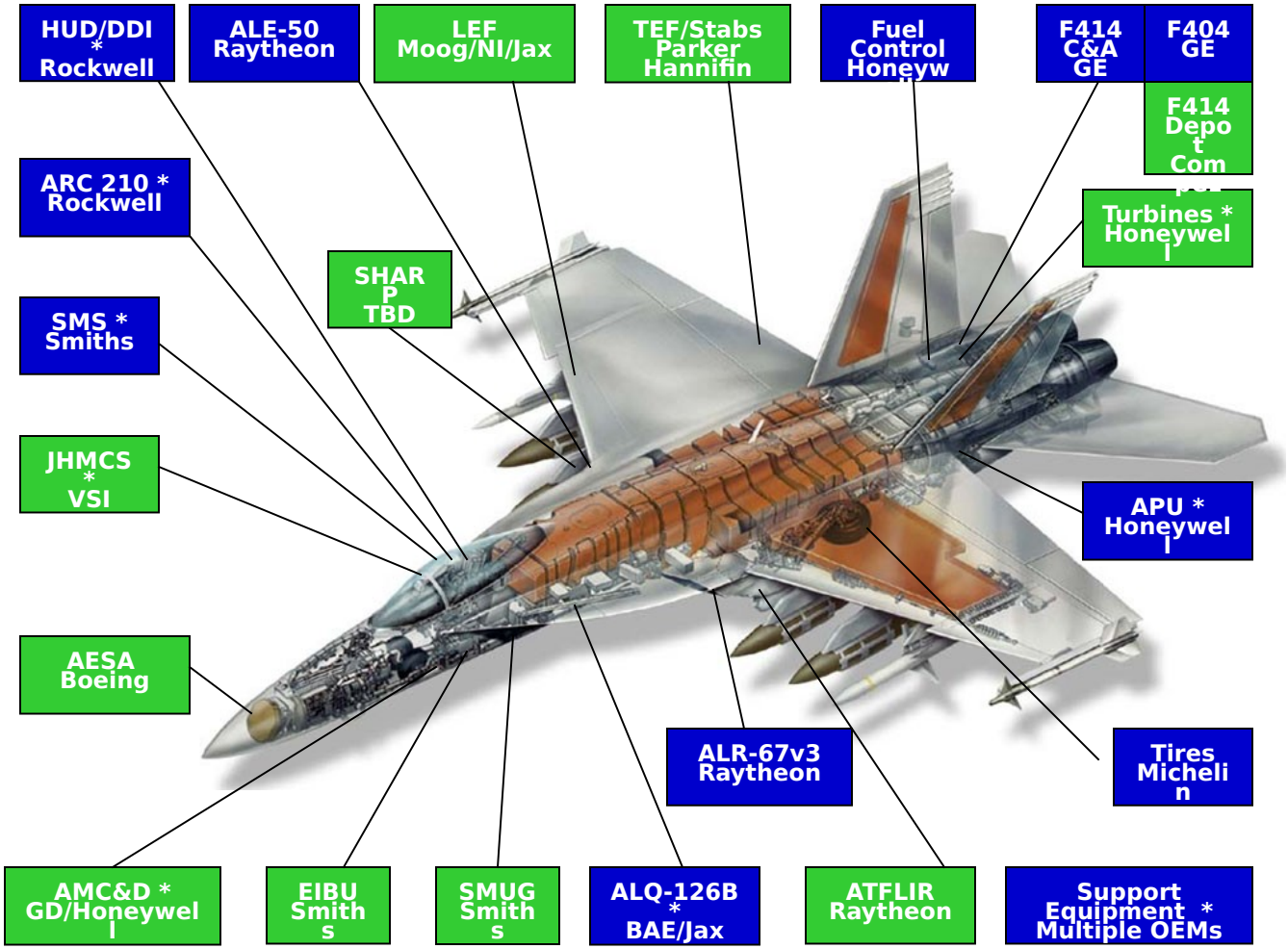
Today

Horizontal Growth

* Target Select A-G Systems/Components on a case by case basis – add to FIRST or non-FIRST PBL as appropriate

F/A-18 Awarded & Pending PBLs by Subsystem

Naval Inventory Control Point



Awarded PBLs

Pending PBLs

* Supports Multiple A/C

FIRST Boeing: <u>73% of E/F</u>

- 4193 E/F WRAs and SRAs
- 653 I-Level Repairables
- 349 Support Equip. Items
- 170 DLA Consumables
- 13,080 DLA Second Source
- 10,970 Non-DLA Consumables

FIRST FY06 and Beyond:

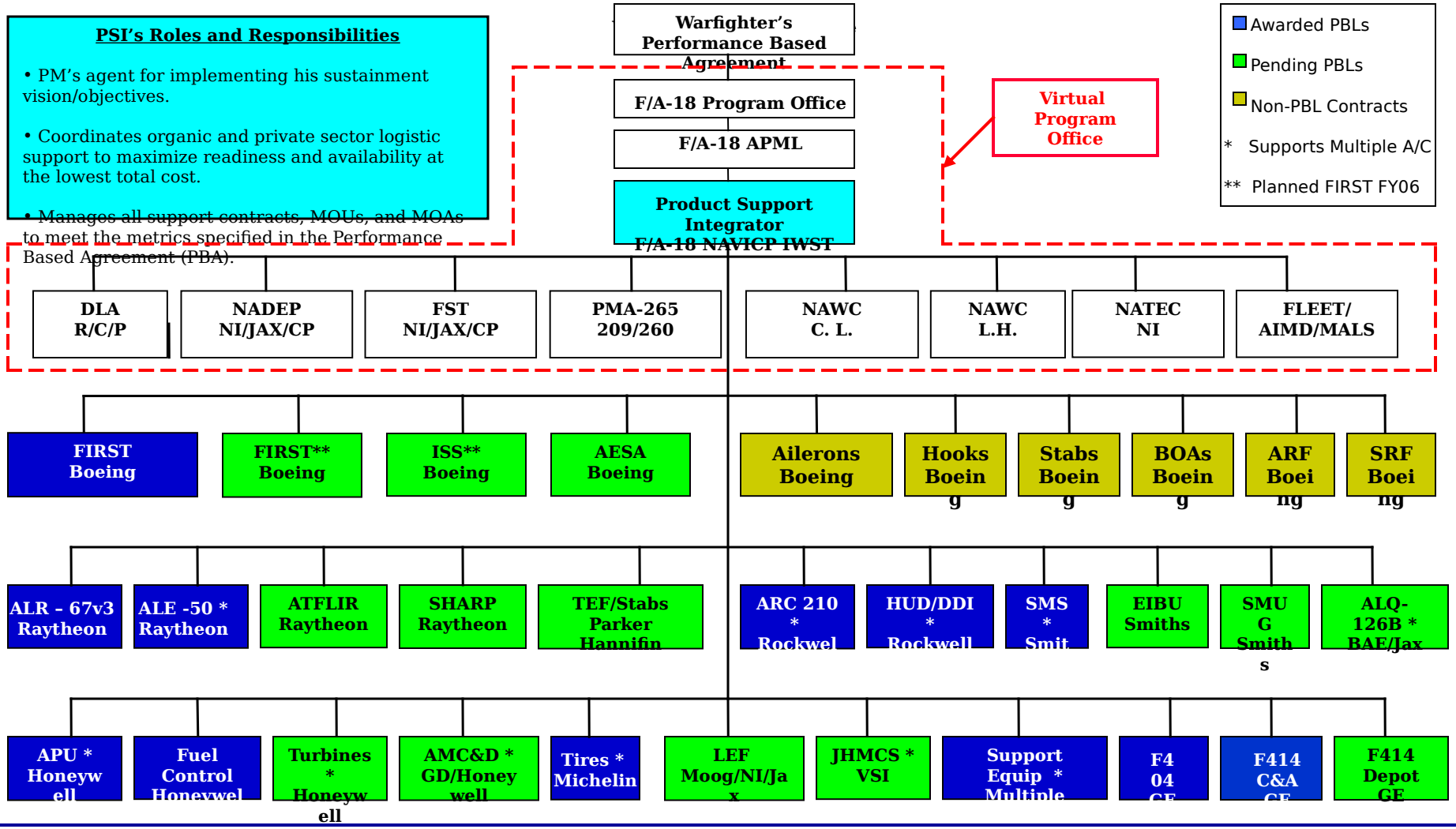
- F/A-18 A through F
- EA-18G
- ISS
- AESA
- DLA Consumables
- FMS
- Modifications
- Retrofits

Naval Inventory Control Point

F/A-18 Awarded and Pending PBLs by OEM

PSI's Roles and Responsibilities

- PM's agent for implementing his sustainment vision/objectives.
- Coordinates organic and private sector logistic support to maximize readiness and availability at the lowest total cost.
- Manages all support contracts, MOUs, and MOAs to meet the metrics specified in the Performance Based Agreement (PBA).



Naval Inventory Control Point

Samples of Navy Performance Based Logistics Success

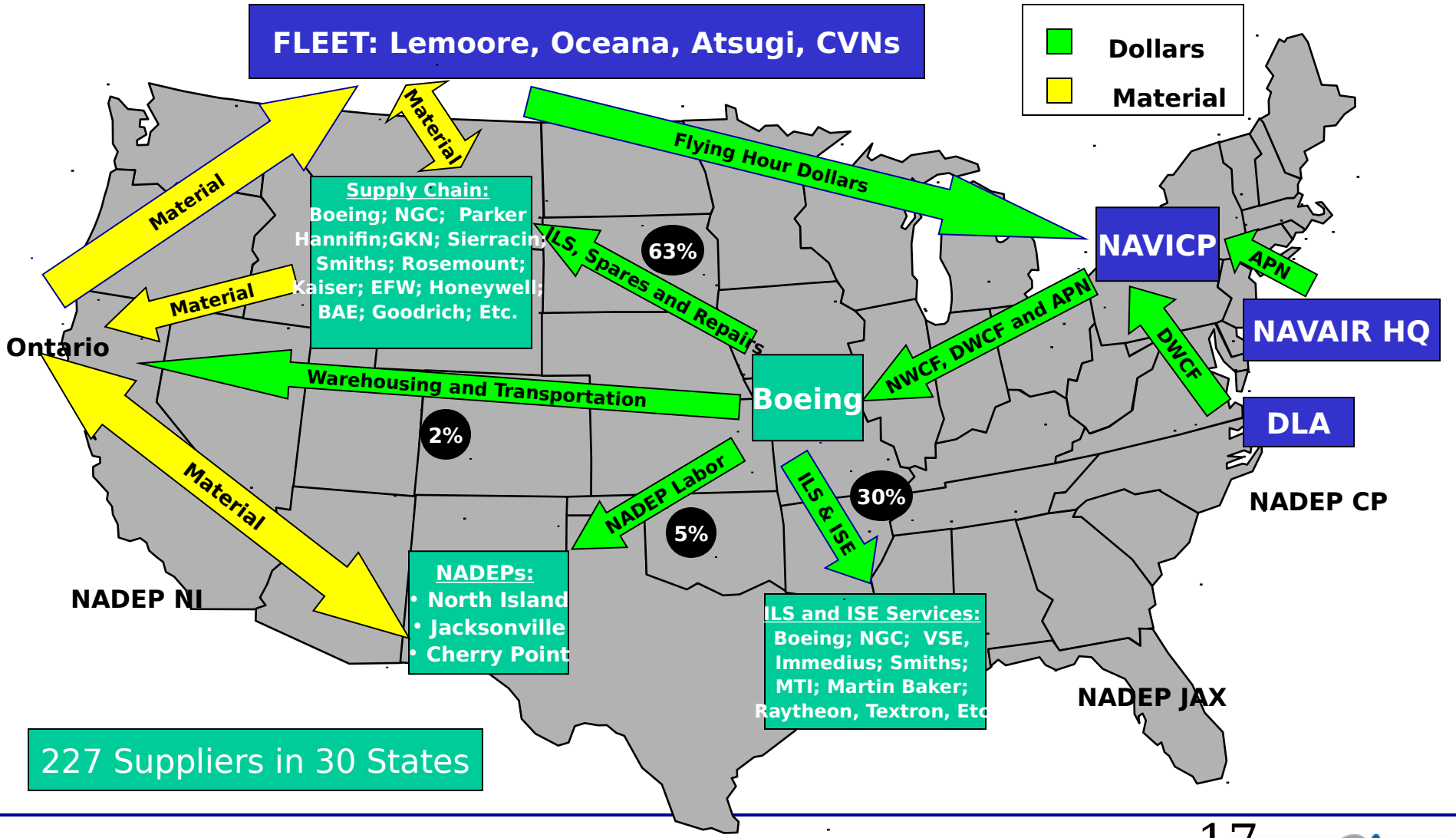
PBL (OEM) Results	APU (Honeywell)		F404 (GEAE)		Displays (Rockwell-Collins)		SMS (Smiths)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Availability	65 %	94%	43 %	95%	47 %	99%	61 %	99%
Backorders	125	5	718	0	583	0	489	0
R-TAT *	162	38	116	81	55	22	177	40
$ Avoidance	N/A	$70 M	N/A	$90 M	N/A	$94 M	N/A	$15 M

* Repair Turnaround Time Reductions in days

Updated 11-21-05

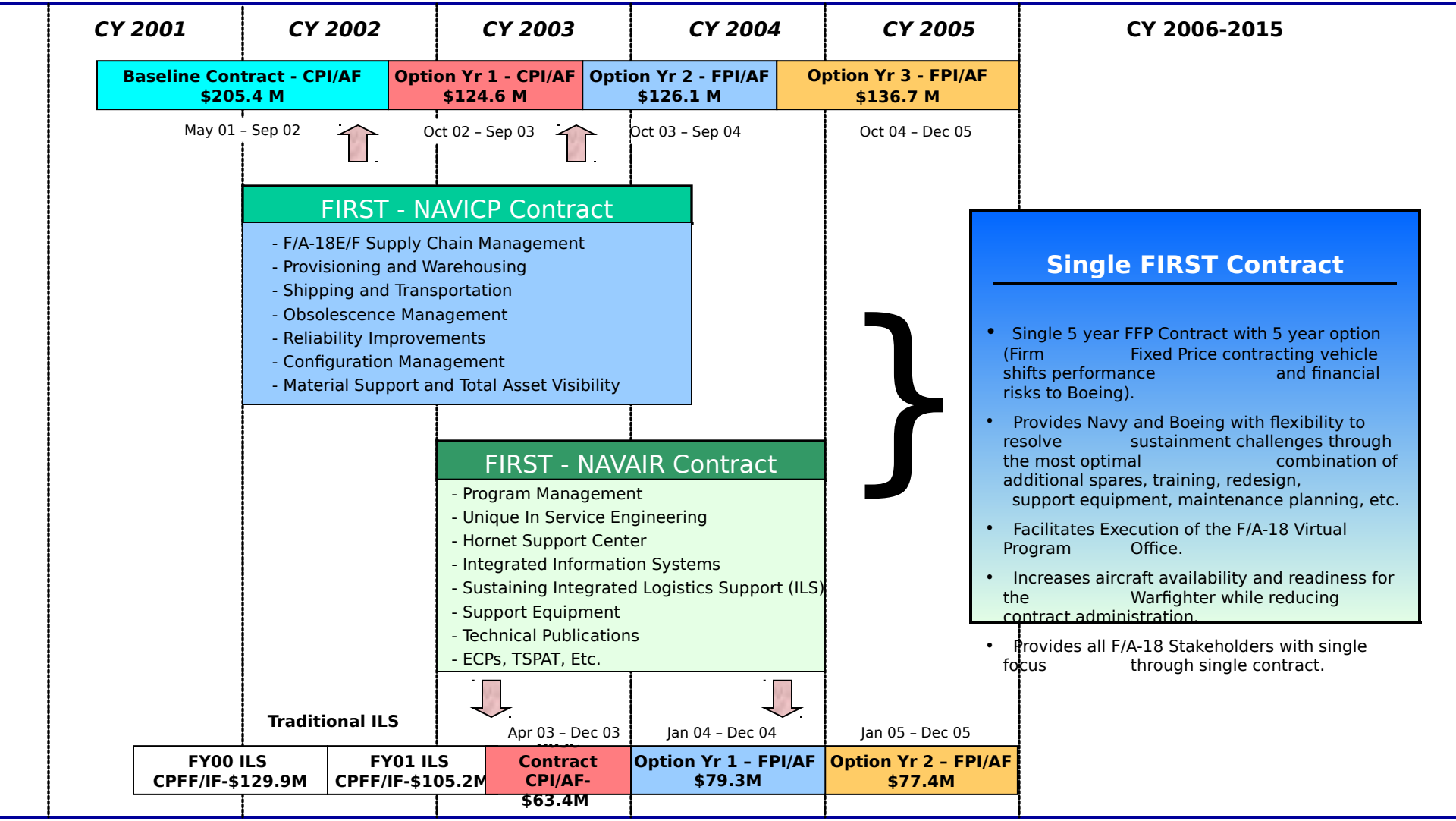
FIRST Dollar and Material Flow

Naval Inventory Control Point



Migration to a Single FIRST Firm Fixed Price Contract

Naval Inventory Control Point


CY 2001
CY 2002
CY 2003
CY 2004
CY 2005
CY 2006-2015
Baseline Contract - CPI/AF $205.4 M
Option Yr 1 - CPI/AF $124.6 M
Option Yr 2 - FPI/AF $126.1 M
Option Yr 3 - FPI/AF $136.7 M
May 01 – Sep 02
Oct 02 – Sep 03
Oct 03 – Sep 04
Oct 04 – Dec 05
FIRST - NAVICP Contract
- F/A-18E/F Supply Chain Management
- Provisioning and Warehousing
- Shipping and Transportation
- Obsolescence Management
- Reliability Improvements
- Configuration Management
- Material Support and Total Asset Visibility
FIRST - NAVAIR Contract
- Program Management
- Unique In Service Engineering
- Hornet Support Center
- Integrated Information Systems
- Sustaining Integrated Logistics Support (ILS)
- Support Equipment
- Technical Publications
- ECPs, TSPAT, Etc.
Single FIRST Contract
• Single 5 year FFP Contract with 5 year option (Firm Fixed Price contracting vehicle shifts performance and financial risks to Boeing).
• Provides Navy and Boeing with flexibility to resolve sustainment challenges through the most optimal combination of additional spares, training, redesign, support equipment, maintenance planning, etc.
• Facilitates Execution of the F/A-18 Virtual Program Office.
• Increases aircraft availability and readiness for the Warfighter while reducing contract administration.
• Provides all F/A-18 Stakeholders with single focus through single contract.
Traditional ILS
Apr 03 – Dec 03
Jan 04 – Dec 04
Jan 05 – Dec 05
FY00 ILS CPFF/IF-$129.9M
FY01 ILS CPFF/IF-$105.2M
Contract CPI/AF-$63.4M
Option Yr 1 – FPI/AF $79.3M
Option Yr 2 – FPI/AF $77.4M

Naval Inventory Control Point

2006 to 2010 FIRST Contract

- FFP Contract with 5 yr Base and Single 5 yr Option
- Combines Previously Separate Supply and ILS FIRST Contracts
- Utilizes 20 plus Fleet Driven Performance Metrics
- J & A for $2.9B with Built-In Flexibility to Support all F/A-18 T/M/S
- NAVICP made UCA Award for $995M; NAVAIR Funds sent to NAVICP

Naval Inventory Control Point

Performance Metrics and Incentive Plan

- Focused on the Fleet
  - CNAF signed PBA specifying warfighter's requirements
  - F/A-18 availability and readiness will be improved
  - Total operating and cost per flight hour will be reduced
- Composed of three sections
  - Aircraft Management
  - ILS Performance
  - Contract Incentive
- With three contract incentive targets
  - Supply Response Time (targets SCM performance)
  - Product Support (targets ILS performance)
  - Fleet/Customer Survey (targets satisfaction of warfighter)

Naval Inventory Control Point

Fleet Focused Performance Plan

- Plan utilizes over 20 metrics such as A_o, RFT, MFHBD, SRT, Cost @ FH, etc.
- Includes a disincentive fee structure based on the following 3 areas:
  - Supply Response Time (65% of fee pool)
    - Measures Boeing's ability to deliver the right material at the right place at the right time…every time.
    - Rewards 1st time quality (properly packaged with correct paperwork), 1st pass requisition fills (4 days for high priority and 16 days for low priority), & elimination of aged backorders
  - Product Support (25% of fee pool)
    - Aggregation of ILS metrics (i.e. maintenance planning, support equipment, technical data, site activation, hornet support network, depot capability, etc.)
    - Rewards increase in availability, readiness, and MFHBD/Time-on-Wing
  - Fleet/Customer Satisfaction (10% of fee pool)
    - Measures Boeing's support of primary F/A-18 stakeholders (Lemoore, Oceana, Commander Strike Fighter Wings, Lakehurst, Fleet Support Teams, Deployed Carriers, etc.)
    - Rewards responsive day-to-day operational support of all F/A-18s

eing's Failure to Meet Performance Metrics Results in Lost Pr

Naval Inventory Control Point

Fleet Readiness Metrics

FIRST before 2006:

NAVICP	**Award Fee Metrics** 1. Supply Response Time 2. Time on Backorder 3. Avg Age of Unfilled BOs 4. CV Stockage Effectiveness 5. Supply Chain Mgt Support
NAVAIR	6. Supportability 7. Site Activation 8. Hornet Support Network 9. Supportability/Reliability 10. Sustainability

FIRST after 2006:

	Metric Category	Report Only	Expected Performance	Contract Incentive
2.1	Ready for Tasking	√		
2.2	Operational Availability	√		
2.3	Cost per Flight Hour	√		
2.4	NMCS/PMCS 1st Day Requisition Fill	√		
2.5	Cannibalization per 100 Flight Hours	√		
2.6	Mean Flight Hours Between Demand (MFHBD)	√		
3.1	Supply Support		√	
3.2	Maintenance Planning		√	
3.3	Technical Data		√	
3.4	Support Equipment		√	
3.5	Hornet Support Network		√	
3.6	Depot Capability		√	
3.7	Site Activation		√	
3.8	AME		√	
4.1	Supply Response Time (SRT)		√	√
4.2	Product Support			√
4.3	Fleet Satisfaction			√

proving Fleet Readiness by Increasing Performance Expectatio

Aircraft Management Metrics

Ref #	Metric Name	Measure
2.1	RFT	Boeing & Navy's ability to meet the Fleet allocation.
2.2	Availability (A_O)	Boeing & Navy's ability to achieve readiness at aircraft level
2.3	Cost @ Flight Hour	Boeing and Navy's ability to reduce cost per flight hour
2.4	NMCS/PMCS 1st Day	Boeing's responsiveness to high priority requisitions
2.5	Canns @ 100 Flight Hours	Boeing's ability to influence maintenance and supply practices
2.6	MFHBD	Boeing's ability to increase time-on-wing

ILS Performance Metrics

Ref #	Category	Measure
3.1.1	SRT	Fleet Requisitions Processing Timeliness
3.1.2	DCNs	Provisioning DCN Processing Timeliness
3.2	Maintenance Planning	Logistics Rqmts Change Requests (LRCR) Response Timeliness
3.3.1	TPDR	Fleet TPDR Response Timeliness
3.3.2		Fleet Tech Data Quality (Quantity)

ILS Performance Metrics

Ref #	Category	Measure
3.4.1	Support Equipment	Site Activation Delivery
3.4.2		FAT Schedule Maintenance/Support
3.4.3		SE EI Response to USN
3.4.4		SERD Submittals to USN
3.5	HSC	HSN RFA / RFI Response
3.6.1	Depot Support	Scheduled Component Capability
3.6.2		Support of Depot Site Activation
3.7	Site Activation	Quality of ILS Sustaining O&I level Site Activation Support
3.8	AME	Request for AME Assistance (RFAA) Response Timeliness

Contract Incentive Metrics

Ref #	Category	Measure
4.1	SRT	Incentive based on point system (focuses on 1st time fills and age of backorder)
4.2	Product Support (ILS)	Incentive based on achieving customer expected performance values
4.3	Fleet/Customer Satisfaction Survey	PCO will utilize survey results from a dozen or so organizations to ensure that Boeing is responsive to the "subjective" requirements of those organizations

% Incentive Withhold for Failure to Meet Customer Expected Performance Values

Naval Inventory Control Point

Supply Support Metrics

FY01 to FY05:

Award Fee Metrics

	% of Award Fee Earned
1. Supply Response Time	
a.Repairables 48 hours	39%
b.Consumables 48 hours	68%
c.Aggregate 120/360 hours	91%
2. Average Time on Backorder	
a.Priority 1 thru 3	99%
b.Priority 4 thru 15	92%
3. Average Age of Unfilled BOs	
a.Priority 1 thru 3	100%
c.	

FY06 and Beyond:

Disincentive Fee Metrics

1. **Supply Response Time "with Points"**
   - a.Repairables Priority 1 thru 3
   - b.Consumables Priority 1 thru 3
   - c.Repairables Priority 4 thru 15
   - d.Consumables Priority 4 thru 15

SRT "with Points" requires Boeing to:

a. Eliminate **all** backorders within specified time periods

b. Focus on age of **each** backorder vice the "average" age of **aggregate** backorders

c. Based on Boeing's past backorder fulfillment times/age, the Navy has raised performance levels.

ncentivizes Boeing to Aggressively Manage Backorder

NAVAIR, NAVICP, DLA, & Boeing - One Team

CSDR Reporting Plan

- OEMs will submit CSDRs annually by major and sub-major cost elements for ILS, Spares and Repair
- CSDRs collect actual incurred costs and are the basis for projecting future costs
- Actual costs are the most valuable data in the hierarchy of DoD cost estimating sources
- ILS costs traditionally reported only in conjunction with development or production contracts
- DoD Instruction 5000.2 silent regarding CSDR reporting requirements for PBLs

Naval Inventory Control Point

FY 06 to FY 10 FIRST LTC Team

Enterprise Level
NAVAIR: RADM Venlet
NAVICP: RADM Roesner
BOEING: Ginger Barnes

Executive Level
NAVAIR: CAPT Gaddis/Bill Taylor/CAPT Jaynes
NAVICP: CAPT Rau/Donna Gruber
BOEING: Terry Kunkel

Steering Committee Level
NAVAIR: CDR Rick Nielsen/Tracy Moran
NAVICP: CDR Santo Salvo/Nick Viggiano
BOEING: Larry Sellman/Bill Collier

FIRST FY 06 Long Term Contract Award Team

	Planning	Contracts	BCA/Pricing	Supply Chain	ILS & ISE	Legal/Comptroller
NAVAIR	Travis Hayes	Geoff Tisone	Tim Lawless	Tim Petrow	Tim Petrow	Valerie Odell/Mary Pracchia
NAVICP	Nadine Baj	Gerry Tonoff	Steve Wiley	Nadine Baj	G. Galasso/M. Smith	Cunningham/CDR Skinner
BOEING	Joe Luberda	Wayne Clermont	Jeremy Wentz	R. McCreary	J. Prevedel/S. Reynolds	N/A
DLA	Chuck Brom	Roy Peay	Brian Benfer	Patsy Johnson	Edilia Correa	N/A

NAVAIR, NAVICP, DLA, & Boeing - One Team

Naval Inventory Control Point

FIRST Evolution and Improvements

FIRST FY 2006 to FY 2010 allows the Navy to improve support to the Warfighter while reducing cost to the Taxpayer

FY01 – FY05

- F/A-18 E/F Only
- Two Cost Plus Contracts
- Multiple Award Fee Metrics
- Passive Warfighter Feedback
- Obsolescence Plan
- Navy Reliability Investments

FY06 – FY10

- All F/A-18 Type Model Series
- Single Fixed Price Contract
- Disincentive Fee Metrics
- Automated Warfighter Feedback
- DMSMS Plan
- Boeing Reliability Investments

FY11 – FY15

- Single Availability Metric (Ao)
- Single Line of Accounting
- Non-severable CLIN

Merging of Contracts = Improved Readiness at Reduced Cost